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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/667,513

09/23/2003

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4459-131

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02/22/2005

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EXAMINER

NGUYEN, HOAI AN D

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-------------------------------|---------------------------|--|
| Office Action Summary | Application No. 10/667,513 | Applicant(s) WU ET AL. | |
| | Examiner Hoai-An D. Nguyen | Art Unit 2858 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) 16-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner:
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>09232003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species (A) readable on claims 1-15 in the reply filed on February 3, 2005 is acknowledged.
2. Claims 16-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species (B), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 2, 2005.

Drawings

3. The drawings are objected to because "60" in FIG. 6 should be replaced with -- 66 -- as disclosed in first paragraph on page 6 of the specifications. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

Art Unit: 2858

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6, 10, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Horn et al. (US 6,563,299).

Van Horn et al. teaches an apparatus for measuring parasitic capacitance and inductance of I/O leads on an electrical component using a network analyzer comprising:

With regard to claims 1 and 10, a substrate (FIG. 2, substrate 105), a first surface (FIG. 2, upper surface 106), a second surface opposite to the first surface (FIG. 2, lower surface 107), a thru-circuit (FIG. 2, conductive via 134) having two contacts (FIG. 2, electrical lead 130 and ball lead 132) electrically connected to each other and respectively disposed on the first surface and the second surface (Column 1, lines 39-61), and driving the two probes to be in contact with the two contacts, respectively, and sending the measuring signal (Column 6, lines 21-43).

With regard to claims 2 and 14, the substrate / thru-circuit comprises a via (FIG. 2, conductive via 134) electrically connected to the two contacts (FIG. 2, electrical lead 130 and ball lead 132).

With regard to claim 3, the two contacts are disposed by the opposite sides of the via, respectively (FIG. 2, conductive via 134, electrical leads 130 and ball lead 132). Noted that the far left contact 132 in FIG. 2, as an example, is a ball lead, therefore the left half of the ball lead 132 and the electrical lead 130 are disposed by the opposite sides of the conductive via 134.

With regard to claim 4, the two contacts are disposed by the same side of the via (FIG. 2, conductive via 134, electrical lead 130 and ball lead 132). Noted that the far left contact 132 in FIG. 2, as an example, is a ball lead, therefore the right half of the ball lead 132 and the electrical lead 130 are disposed by the same side of the conductive via 134.

With regard to claims 5 and 15, a side wall defined between the first surface and the second surface (FIG. 2, upper surface 106 and lower surface 107), wherein the two contacts (FIG. 2, electrical lead 130 and ball lead 132) of the thru-circuit (FIG. 2, conductive via 134) abut the edge of the impedance standard substrate and the thru-circuit further comprises a trace (FIG. 2, conductive via 134) disposed on the side wall for electrically connecting the two contacts (Column 1, lines 39-61).

With regard to claim 6, the trace is disposed by circuit layout on the side wall (FIG. 2 and column 1, lines 39-61).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7-9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Horn et al. in view of Dunsmore (US 6,643,597).

Van Horn et al. teach all that is claimed as discussed in the above rejection of claims 1-6, 10, 14 and 15, but they do not explicitly teach the followings:

- A pair of open-circuits disposed on the first surface and the second surface, respectively.
- A pair of short-circuits disposed on the first surface and the second surface, respectively.
- A pair of load-circuits disposed on the first surface and the second surface, respectively.

However, Dunsmore teaches a method of calibrating a test system using unknown standards comprising:

- With regard to claims 7 and 11, a pair of open-circuits disposed on the first surface and the second surface, respectively (From column 8, line 41 to column 9, line 2 and from column 10, line 59 to column 11, line 29).

- With regard to claims 8 and 12, a pair of short-circuits disposed on the first surface and the second surface, respectively (From column 8, line 41 to column 9, line 2 and column 10, lines 26-58).
- With regard to claims 9 and 13, a pair of load-circuits disposed on the first surface and the second surface, respectively (From column 8, line 41 to column 9, line 2 and column 11, lines 30-56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus for measuring parasitic capacitance and inductance of I/O leads on an electrical component using a network analyzer of Van Horn et al. to incorporate the teaching of a pair of open-circuits, a pair of short-circuits and a pair of load-circuits disposed on the first surface and the second surface, respectively taught by Dunsmore since Dunsmore teaches that such an arrangement is beneficial to provide for a choice of calibration standards based on conventional guidelines for choosing standards as disclosed in column 8, lines 41-60.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant's attention is invited to the followings whose inventions disclose similar devices.

- Doi (US 2003/0115008) teaches a test fixture with adjustable pitch for network measurement.

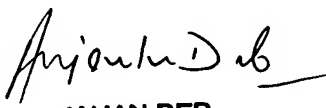
- Adamian (US 2004/0051538) teaches a method and system for calibrating a measurement device path and for measuring a device under test in the calibrated measurement device path.

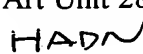
CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai-An D. Nguyen whose telephone number is 571-272-2170. The examiner can normally be reached on M-F (8:00 - 5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ANJAN DEB
PRIMARY EXAMINER

Hoai-An D. Nguyen
Examiner
Art Unit 2858


HADN